

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for image processing comprising:
 - a first compressing ~~section~~ module which compresses each block of an image into first compressed data~~[[;]], each block of the first compressed data including code length adjustment data in order to obtain a fixed length of the code;~~
 - a first code converting ~~section~~ module which converts the first compressed data into second compressed data so that each block of the second compressed data has a code length equal to or different from that of each block of the first compressed data, a block of the second compressed data including marker code when the code length of the block is formed as a variable length;
 - a second code converting ~~section~~ module which converts the second compressed data into third compressed data so that each block of the third compressed data has a code length equal to that of each block of the first compressed data; and
 - a decoding ~~section~~ module which decodes the third compressed data.
2. (Currently Amended) The apparatus for image processing according to claim 1, wherein the decoding ~~section~~ module also decodes the first compressed data.
3. (Currently Amended) The apparatus for image processing according to claim 1, further comprising a color determining ~~section~~ module which determines whether the image is colored or monochromatic,
 - wherein the first code converting ~~section~~ module converts the first compressed data into the second compressed data in accordance with the result of the determination by the color determining ~~section~~ module so that each block of the second compressed data has a code length equal to or different from that of each block of the first compressed data, and
 - the ~~first~~ second code converting ~~section~~ module converts the second compressed data into the third compressed data in accordance with the result of the determination by the color

determining ~~section~~ module so that each block of the third compressed data has a code length equal to that of each block of the first compressed data.

4. (Currently Amended) The apparatus for image processing according to claim 1, wherein the decoding ~~section~~ module executes decoding the third compressed data in a code format of the first compressed data, and

the second code converting ~~section~~ module converts the second compressed data into the third compressed data so that each block of the third compressed data has a code length and a code format equal to those of each block of the first compressed data.

5. (Currently Amended) The apparatus for image processing according to claim 1, wherein the decoding module decodes the first compressed data, and if the third compressed data has a code format different from that of the first compressed data, the decoding ~~section~~ module decodes the third compressed data by further converting the code format of the third compressed data into a code format of the first compressed data.

6. (Currently Amended) The apparatus for image processing according to claim 1, further comprising system control ~~section~~ module for instructing on a mode for image processing,

wherein the first code converting ~~section~~ module converts the first compressed data into the second compressed data in accordance with the mode instructed ~~on by the mode instructing means~~ a system control module so that each block of the second compressed data has a code length equal to or different from that of each block of the first compressed data, and

the second code converting ~~section~~ module converts the second compressed data into the third compressed data so that each block of the third compressed data has a code length equal to that of each block of the first compressed data.

7. (Currently Amended) The apparatus for image processing according to claim 1, further comprising a memory which stores the third compressed data;

a color determining ~~section~~ module which determines whether the image is colored or monochromatic; and

system control ~~section~~ module for instructing on a mode for image processing,

wherein the decoding ~~section~~ module decodes the third compressed data read from the memory,

in accordance with at least either a color determination result produced by the color determining ~~section~~ module or the mode instructed on by the system control ~~section~~ module, the first code converting ~~section~~ module converts the first compressed data into the second compressed data so that each block of the second compressed data has a code length equal to or different from that of each block of the first compressed data, and

the memory stores plural types of third compressed data having different color determination results and different pieces of mode instruction information.

8. (Withdrawn-currently amended) An apparatus for image processing comprising:
a dividing ~~section~~ module which divides an image into blocks;
a color determining ~~section~~ module which determines whether the image is colored or monochromatic; and
a block color determining ~~section~~ module which determines whether each of the blocks is colored or monochromatic, on the basis of the result of the determination by the color determining ~~section~~ module.
9. (Withdrawn-currently amended) An apparatus for image processing comprising:
a dividing ~~section~~ module which divides an image into blocks; and
a block color determining ~~section~~ module which determines whether each of the blocks is colored or monochromatic.
10. (Withdrawn-currently amended) An apparatus for image processing comprising:
a dividing ~~section~~ module which divides an image into blocks;
a color determining ~~section~~ module which determines whether the image is colored or monochromatic; and

a compressing section module which compresses each of the blocks into which the image has been divided by the dividing section module, together with the result of the determination of a full image plane by the color determining section module.

11. (Withdrawn-currently amended) The apparatus for image processing according to claim 10, wherein the color determining section module makes determination for each of the blocks into which the image has been divided by the dividing section module, and

the compressing section module compresses each of the blocks into which the image has been divided by the dividing section module, together with the result of the determination for the each block which result is produced by the color determining section module.

12. (Withdrawn-currently amended) The apparatus for image processing according to claim 10, wherein the color determining section module makes determination for the entire image, and

the compressing section module compresses each of the blocks into which the image has been divided by the dividing section module, together with the result of the determination for the entire image which result is produced by the color determining section module.

13. (Withdrawn) The apparatus for image processing according to claim 10, further comprising compressed data extracting means for extracting arbitrary compressed data from the compressed data obtained by compressing each of the blocks, extracting the determination result from the compressed data, and generating a second determination result from the determination result.

14. (Withdrawn-currently amended) The apparatus for image processing according to claim 10, further comprising a decoding section module which decodes the compressed data to generate a second determination result from the determination result produced by the color determining section module and compressed together with the image; and

image processing section module which executes image processing on the image in accordance with the second determination result generated by the decoding section module.

15. (Withdrawn-currently amended) An apparatus for image processing comprising:
 - a dividing ~~section~~ module which divides an image into blocks;
 - a compressing ~~section~~ module which compresses each of the blocks into which the image has been divided by the dividing ~~section~~ module, to generate compressed data for each block; and
 - a color determining ~~section~~ module which determines whether the image is colored or monochromatic, on the basis of the compressed data for each block.
16. (Withdrawn-currently amended) An apparatus for image processing comprising:
 - a dividing ~~section~~ module which divides an image into blocks,
 - a first color determining ~~section~~ module which determines whether the entire image is colored or monochromatic and then outputs a first determination result;
 - a second color determining ~~section~~ module which determines whether each block of the image is colored or monochromatic and then outputs a second determination result; and
 - a third color determining ~~section~~ module which outputs a third determination result on the basis of the first determination result and the second determination result.
17. (Withdrawn-currently amended) An apparatus for image processing comprising:
 - an input ~~section~~ module to which an image is inputted;
 - a color determining ~~section~~ module which determines whether each line of the image is colored or monochromatic and then outputs a determination result;
 - a colored/monochromatic image generating ~~section~~ module which converts each predetermined unit of the image into a colored and monochromatic images, in accordance with the determination result outputted by the color determining ~~section~~ module; and
 - an image output ~~section~~ module which outputs the colored and monochromatic images generated by the colored/monochromatic image generating ~~section~~ module, in accordance with the determination result outputted by the color determining ~~section~~ module.
18. (Withdrawn-currently amended) An apparatus for image processing comprising:
 - a plane determination ~~section~~ module which analyzes image plane information for each block of the image;

a compressing ~~section~~ module which compresses each block of the image into first compressed data;

a first code converting ~~section~~ module which converts the first compressed data into second compressed data in accordance with the plane information so that each block of the second compressed data has a code length equal to or different from that of each block of the first compressed data; and

a second code converting ~~section~~ module which converts the second compressed data into third compressed data so that each block of the third compressed data has a code length equal to that of each block of the first compressed data.

19. (Withdrawn) The apparatus for image processing according to claim 18, wherein the plane information indicates whether or not the plane is white.

20. (Withdrawn-currently amended) The apparatus for image processing according to claim 19, further comprising a generating ~~section~~ module which generates plane information on the entire image from the plane information for each block.

21. (Withdrawn-currently amended) An apparatus for image processing comprising:
an input ~~section~~ module to which a colored image and a monochromatic image are inputted;
an image converting ~~section~~ module which converts a monochromatic image format into a colored image format; and
a compressing ~~section~~ module which compresses the colored image and the monochromatic image converted by the image converting ~~section~~ module.

22. (Withdrawn-currently amended) An apparatus for image processing comprising:
a compressing ~~section~~ module which compresses each block of an image into first compressed data;
a first code converting ~~section~~ module which converts the first compressed data into second compressed data so that the block of the second compressed data has code length equal to and different from that of the block of the first compressed data;

a second code converting ~~section~~ module which converts the second compressed data into third compressed data with a variable code length;

a third code converting ~~section~~ module which converts the second compressed data into fourth compressed data having a fixed code length equal to that the first compressed data; and

a decoding ~~section~~ module which decodes the fourth compressed data.

23. (Withdrawn-currently amended) An apparatus for image processing comprising:

a compressing ~~section~~ module which compresses each block of an image into first compressed data with a fixed code length;

a first code converting ~~section~~ module which converts the first compressed data into second compressed data so that the block of the second compressed data have code length equal to and different from that of the block of the first compressed data;

a second code converting ~~section~~ module which converts the second compressed data into third compressed data with a variable code length;

a third code converting ~~section~~ module which converts each block of externally inputted fourth compressed data with a variable code length into fifth compressed data with a variable code length;

a fourth code converting ~~section~~ module which converts the second and fifth compressed data into sixth compressed data having a code length equal to that of the first compressed data; and

a decoding ~~section~~ module which decodes the sixth compressed data.

24. (Currently Amended) An apparatus for image processing comprising:

a compressing ~~section~~ module which compresses each block of an image into first compressed data with a variable code length;

a first code converting ~~section~~ module which converts the first compressed data into second compressed data with a fixed code length; a second converting ~~section~~ module which converts the second compressed data into third compressed data with the fixed code length;

a decoding ~~section~~ module which decodes the second or third compressed data.

25. (Currently Amended) An apparatus for image processing comprising:
a compressing section module which compresses an image into first compressed data with a fixed code length and second compressed data with a variable code length;
a first code converting section module which converts the second compressed data into third compressed data with a fixed code length; and
a decoding section module which decodes the first or third compressed data.
26. (Withdrawn-currently amended) An apparatus for image processing comprising:
a compressing section module which compresses an image into first compressed data;
a first code converting section module which converts the first compressed data into second compressed;
a second code converting section module which converts the second compressed data into third compressed data;
a third code converting section module which converts externally inputted fourth compressed data into fifth compressed data having a code length equal to that of the third compressed data; and
a decoding section module which decodes the third or fifth compressed data.
27. (Withdrawn) The apparatus for image processing according to claim 26, wherein when an image based on both third and fifth compressed data is printed on the same page, an equal sub-scanning-wise resolution and an equal sub-scanning-wise processing unit are used on a main scanning line.
28. (Withdrawn-currently amended) An apparatus for image processing comprising:
a compressing section module which compresses each block of an image into first compressed data;
a first code converting section module which converts the first compressed data into second compressed data;
a second code converting section module which converts the second compressed data into third compressed data;

a third code converting ~~section~~ module which converts externally inputted fourth compressed data into fifth compressed data;

a memory which operates when storing, of the third and fifth compressed data, only the third compressed data, to store the third compressed data compressed for each block, in a format of the third compressed data,

the memory operating when storing, of the third and fifth compressed data, only the fifth compressed data, to store the fifth compressed data compressed for each block, in a format of the fifth compressed data,

the memory operating when storing both third and fifth compressed data, to store the third and fifth compressed data in one of the formats of the third and fifth compressed data which has a larger code length; and

a decoding ~~section~~ module which decodes the third or fifth compressed data stored in the memory.

29. (Withdrawn-currently amended) An apparatus for image processing comprising:

a compressing ~~section~~ module which converts each block of a multivalued image into first compressed data in the predetermined format;

a first code converting ~~section~~ module which converts the first compressed data into second compressed data;

a second code converting ~~section~~ module which converts the second compressed data into third compressed data in the predetermined format;

a third data converting ~~section~~ module which converts each block of an binary image into fourth compressed data in the predetermined format; and

a decoding ~~section~~ module which decodes the third or fourth compressed data.

30. (Withdrawn-currently amended) An apparatus for image processing comprising:

a compressing ~~section~~ module which compresses each block of an image into first compressed data with a fixed code length;

a first code converting ~~section~~ module which converts the first compressed data into second compressed data with a variable code length;

a second code converting section module which converts the second compressed data into third compressed data with a variable code length;

a third code converting section module which converts each block of externally inputted fourth compressed data with a variable code length into fifth compressed data with a variable code length;

a fourth code converting section module which converts the second and fifth compressed data into sixth compressed data having a fixed code length and a predetermined format; and

a decoding section module which decodes the sixth compressed data.

31. (Withdrawn-currently amended) The apparatus for image processing according to claim 30, further comprising:

a color determining section module which determines whether the image is colored or monochromatic,

wherein the second code converting section module converts the second compressed data into the third compressed data in accordance with the result of the determination by the color determining section module so that each block of the third compressed data has a code length equal to or different from that of each block of the first compressed data; and

the fourth code converting section module converts the second and fifth compressed data into the sixth compressed data having the fixed code length shorter than those of the formats of the second and fifth compressed data and having a monochromatic format.

32. (Withdrawn-currently amended) The apparatus for image processing according to claim 30, wherein the fourth code converting section module converts the second and fifth compressed data into the sixth compressed data in a format having the fixed code length and the same fixed code length as that of the format of the first compressed data.